Fourth Review Conference
of the Parties to the Treaty
on the Non-Proliferation of Nuclear Weapons

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US INFORMATION PERTAINING TO THE TREATY ON THE NON-PROLIFERATION OF NUCLEAR WEAPONS

Since its entry into force on March 5, 1970, the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) has represented the principal legal barrier to the spread of nuclear weapons. Currently 140 states are party to the Treaty, giving it the broadest support of any arms control treaty in history.

The NPT reflects three basic objectives: (1) to stop the further spread of nuclear weapons, (2) to provide a sound basis for international cooperation in the peaceful uses of nuclear energy through a system of safeguards administered by the International Atomic Energy Agency, and (3) to encourage negotiations in good faith on nuclear and non-nuclear arms control.

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A. PREVENTING THE FURTHER SPREAD OF NUCLEAR WEAPONS

Articles I and II of the Treaty specifically seek to prevent the further spread of nuclear weapons, thereby strengthening the security and well-being of all states. Under Article I, the nuclear weapon states party to the Treaty pledge not to transfer nuclear explosives to any other state, and not to assist, in any way, non-nuclear weapon states to manufacture or acquire such devices. Under Article II, 137 non-nuclear weapon states party to the Treaty have pledged not to manufacture or otherwise acquire nuclear explosives, or to seek or receive assistance in the manufacture of nuclear explosives.

Article III obligates the non-nuclear weapon states parties to accept safeguards, administered by the International Atomic Energy Agency (IAEA), on all of their peaceful nuclear activities. Such safeguards provide necessary assurance that nuclear materials in non-nuclear weapon states are not diverted from peaceful purposes to the manufacture of nuclear explosives. Their acceptance demonstrates a country's peaceful intentions. This overall fabric of non-proliferation assurances and safeguards is an essential basis for peaceful nuclear cooperation among NPT parties provided for under Article IV.

Article III also obligates all NPT parties to require IAEA safeguards on their nuclear exports to non-nuclear weapon states, including non-nuclear weapon states not party to the Treaty.

Article I - Non-Proliferation Commitment

The United States has not transferred nuclear weapons, nor assisted, encouraged, or induced any non-nuclear weapon state to manufacture or otherwise acquire a nuclear explosive device. US law, policy, procedures, and regulations are designed to ensure that the US (including government agencies, private corporations, and individuals) does not directly or indirectly assist any non-nuclear weapon state to build or acquire a nuclear device.

In the twenty years since the Treaty's entry into force the United States has implemented a comprehensive system of controls over US exports of both nuclear and dual-use items that might be used for nuclear explosive purposes. These controls are to ensure that such exports are approved only for legitimate non-explosive uses in conformance with the US obligations pursuant to Article I.

Article III - Safeguards

Pursuant to Article III, the IAEA applies an extensive system of safeguards to ensure that nuclear materials in non-nuclear weapon state parties are used solely for non-explosive purposes. This system has demonstrated its value and effectiveness through 20 years of experience in support of the NPT. By providing a high degree of confidence that nuclear materials are used only for peaceful purposes, the IAEA safeguards system provides an indispensable basis for nuclear cooperation. Since 1984, there has been a 10 percent increase in the number of major facilities under safeguards. About 900 nuclear installations are now under IAEA safeguards in the territory of the parties.

By early 1990, safeguards agreements required by Article III had been negotiated and were in force for 82 parties. This includes five parties for whom agreements entered into force since 1984. Agreements with 13 additional parties are awaiting entry into force. While more than 40 NPT parties have yet to negotiate required safeguards agreements to meet fully their treaty obligations, only one of these countries has significant nuclear activities.

In the view of the United States, safeguards implementation has been conducted in careful conformity with the requirements of Article III.3, including the important objective of ensuring that safeguards not hamper international cooperation or economic or technical development. The IAEA safeguards have not led to undue interference in facility operation or compromised information protected as commercially confidential. A high level of cooperation between the IAEA and the inspected state is key to achieving effective safeguards while protecting these interests of NPT parties.

The scope and effectiveness of IAEA safeguards have increased since 1985 in both their scope and their quality. During 1989 the IAEA carried out 54 percent more inspection effort than five years earlier. Much of this increase was made possible by improvements in the IAEA's efficiency in using its resources. During this same period the success of IAEA safeguards, as measured by the number of nuclear facilities at which the inspection goal was attained, increased by 67 percent. Cooperation and assistance by the involved Member States also enabled the IAEA to introduce advanced techniques and equipment which contribute to both safeguards effectiveness and efficiency.

For its part, the United States concluded a voluntary offer safeguards agreement with the IAEA in 1980. Under this agreement, the IAEA has the right to apply safeguards to all nuclear material in all US nuclear facilities, excluding only

those associated with activities having direct national security significance. In exercising this right the IAEA is currently applying safeguards at two of the US facilities that fabricate fuel for power reactors. The list of eligible facilities provided to the IAEA includes more than 240 private and government-owned nuclear facilities. By submitting US facilities to IAEA safeguards, the United States sought to encourage wider adherence to the NPT by demonstrating that NPT adherence and acceptance of IAEA safeguards are not impediments to commercial nuclear activities. At the same time US acceptance of IAEA safeguards on its civil nuclear facilities provides an opportunity for IAEA inspectors and US officials to combine their experience and develop means for improving the efficiency and effectiveness of the safeguards system.

The United States has supported international efforts to strengthen the IAEA safeguards system, voluntarily contributing some $30 million since 1985. These funds have helped support development of new safeguards equipment, inspector training and technical experts loaned to the IAEA without charge to improve the effectiveness and efficiency of safeguards. Altogether, US contributions for these purposes have totaled more than $66 million since the US support program began in 1977. In addition, the U.S. Department of Energy (DOE) manages a long-range international safeguards research and development program at a level of $5 million per year, and it has agreements with several states for cooperative development and exchange of safeguards technology.

The cost of implementing safeguards is a very small fraction of the overall operating costs of nuclear facilities. All member states contribute to the IAEA safeguards budget, which accounts for more than one-third of the total IAEA budget. Under a special safeguards financing formula, however, most member states are shielded from increases in the safeguards budget, and 36 member states now contribute over 98.7 percent of the safeguards budget; the nuclear weapon states bear a substantial share of these expenses.

Since the early 1980's the IAEA has carried out its functions under essentially zero-real-growth budgets. The IAEA has been able to do so, while improving both the quality and scope of safeguards implementation, through greater efficiency in using its safeguards resources and by reducing or eliminating other lower priority programs. The United States has encouraged, and continues to encourage, improvements in efficiency. There are limits, however, as the IAEA has recently

pointed out, on the extent to which the needed expansion of the safeguards system to cover new facilities can be achieved through further increases in the cost-effectiveness of IAEA activities.

The United States continues to support strongly the work of the NPT Exporters Committee, also called the Zangger Committee, in its efforts to develop and apply a consistent interpretation of Article III.2 of the NPT, which calls for the application of IAEA safeguards on nuclear exports to non-nuclear weapon states. The Zangger Committee helps to ensure that NPT supplier nations apply uniform rules for international nuclear trade and that they provide assistance to nuclear activities in non-nuclear weapon states only under appropriate safeguards and other nonproliferation conditions. We encourage all NPT parties to support the work of this Committee.

The United States believes the Zangger Committee should continue to keep its control list under review to take into account advances in nuclear technology and other developments which may have proliferation significance. We encourage Committee members to consider further ways to prevent nuclear exports of any kind that would contribute to nuclear explosive or unsafeguarded activities in non-nuclear weapon states.

The United States continues to urge all major nuclear supplier countries to require full-scope IAEA safeguards in non-nuclear weapon states as a condition for any significant new nuclear supply commitment. We note that Japan adopted this policy in 1989. This policy benefits NPT parties, which have accepted such safeguards under the Treaty, while denying significant new foreign nuclear assistance to those non-nuclear weapon states that have unsafeguarded nuclear activities.

Article VII - Regional Arrangements

Article VII of the NPT states that "Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories."

Pursuant to Article VII of the Treaty, and in accord with its overall non-proliferation policy, the United States believes that the creation of nuclear weapons free zones, under appropriate conditions, can contribute to regional and global security. These conditions include:

-- the initiative for the creation of the nuclear weapon free zone comes from the states in the region concerned;

-- all states whose participation is deemed important participate in the zone;

-- the zone arrangement provides for adequate verification of compliance with the zone's provisions;

-- the establishment of the zone does not disturb existing security arrangements to the detriment of regional and international security;

-- the zone arrangement effectively prohibits the parties from developing any nuclear explosive device, for whatever purpose;

-- the zone arrangement does not seek to impose restrictions on the exercise of rights recognized under international law, particularly the principle of freedom of navigation on the high seas, in international air space, and in straits used for international navigation and the right of innocent passage through territorial seas; and

-- the establishment of the zone does not affect the existing rights of its parties under international law to grant or deny transit privileges, including port calls and overflights, to other states.

TLATELOLCO

The United States strongly supports the Treaty of Tlatelolco, which establishes Latin America as a nuclear weapon free zone. The United States has signed and ratified both Protocols to this Treaty, thereby pledging not to store or deploy nuclear weapons in territories within the zone for which it is internationally responsible, and not to use or threaten to use nuclear weapons against the Latin American states for whom the Treaty is in effect, and not to store, install, or deploy nuclear weapons in the territory of any such state. Pursuant to US obligations under Protocol I, the US-IAEA Tlatelolco Agreement was signed and entered into force in 1989.

The United States takes very seriously and is in full compliance with its obligations under the two Protocols. It also encourages all eligible states that have not done so to take the steps necessary to bring the Treaty fully into force.

RAROTONGA

Another nuclear weapon free zone was created by the South Pacific Nuclear Weapon Free Zone Treaty (or Treaty of

Rarotonga), which entered into force at the end of 1986. After careful study, the United States has determined that, in view of its global security interests and responsibilities, it is not, under current circumstances, in a position to sign the protocols of the Treaty. At the same time, the United States has stated that its military practices are not inconsistent with the Treaty of its protocols.

ANTARCTIC

An important international regime for excluding nuclear explosives from a specific geographical region is the Antarctic Treaty of 1959. The United States proposed the development of a "peaceful purposes only" regime for this area of vital international scientific and ecological interest. The United States continues to conduct all of its activities in Antarctica in scrupulous compliance with the terms of the Treaty.

OTHER AREAS

The United States has consistently supported proposals to establish effective nuclear weapon free zones in South Asia, Africa, and the Middle East, consistent with the criteria noted above.

Article IX - Adherence

The United States has a long-standing policy of encouraging all countries to join the NPT and has actively promoted additional adherence to the Treaty. Increased adherence is a concrete demonstration of the strength and continuing vitality of the Treaty regime. Ten new parties have acceded to the Treaty since the Third Review Conference. They are: Democratic People's Republic of Korea, Malawi, Colombia, Yemen Arab Republic, Trinidad and Tobago, Spain, Saudi Arabia, Bahrain, Qatar, and Kuwait.

B. FOSTERING THE PEACEFUL USES OF NUCLEAR ENERGY

Article IV of the Treaty thus recognizes "the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with Articles I and II of this Treaty." It further commits all parties to "facilitate...the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy." Finally, Article IV calls for the development of applications of peaceful nuclear energy, especially in non-nuclear weapon states and with "due consideration for the needs of the developing areas of the world."

Article IV - Peaceful Uses of Nuclear Energy

Since the "Atoms for Peace" program was launched by President Eisenhower in 1953, nuclear technology has made significant contributions to an improved quality of life in many nations.

There are over 426 nuclear power reactors in operation throughout the world [approximately 318 GW(e)]. Nearly 100 additional nuclear power plants [approximately 79 GW(e)] are under construction. Much of this commitment to nuclear power is centered in the industrialized world; but NPT developing nations such as Bulgaria, Hungary, Republic of Korea, Mexico, and Yugoslavia are producing electricity from nuclear power reactors, while others, such as Egypt, Indonesia, and Romania are continuing to move towards the use of nuclear power. Worldwide in 1989, about 17 percent -- or one-sixth -- of total electricity generation was produced by nuclear power plants. The total electricity generated by nuclear reactors since their entry into the power supply area is equivalent to about 5.7 billion tonnes of coal or 3.35 billion tonnes of oil.

Dozens of developing country NPT parties now have research reactors or have established nuclear scientific establishments. Nuclear and isotopic techniques have been used to study natural processes since the late 1940s and as a result radioactive as well as separated stable isotopes became readily available. The use of such isotopes and the development of analytical tools, including tracer methods in medicine, neutron activation analysis, X-ray fluorescence and atomic absorption spectrometry, have many applications. These techniques have been used to

study environmental pollutants, help solve human health problems, assist in assessing water and mineral resources, and improve the quality and reliability of manufactured items. All NPT parties have begun to make effective use of radioisotopes and radiation in medicine, industry and agriculture.

The NPT has enhanced this contribution and furthered international cooperation in the civil nuclear field. In particular, the non-proliferation assurances and safeguards provisions of the Treaty provide the best possible framework towards ensuring that such assistance will not be misused.

The United States has long recognized that adherence to the NPT should facilitate international nuclear cooperation. Parties to the Treaty should receive special consideration and special benefits in international civil nuclear cooperation in a manner consistent with the overall objectives and spirit of the Treaty. That approach is reflected in the record of specific US nuclear cooperation and assistance since the 1985 Review Conference, as well as in the broad policies guiding US nuclear relationships with other countries.

US COOPERATION: NPT PREFERENCE

US preferential treatment of NPT parties as a group has been clearly demonstrated. In particular:

- For the past ten years all new or amended Agreements for Cooperation with non-nuclear weapon states entered into by the United States have been with parties to the NPT or the Treaty of Tlatelolco.

  US nuclear cooperation with the following parties has continued to be provided for under Agreements for Cooperation:

Australia
Austria
Bangladesh
Belgium[a]
Canada
Columbia
Denmark[a]
Egypt
Finland
Germany, Federal Republic[a]
Greece[a]
Indonesia
Ireland[a]
Italy[a]
Jamaica[b]
Japan
Republic of Korea
Luxembourg[a]
Malaysia[b]
Mexico[b]
Morocco
Netherlands[a]
Norway
Peru
Philippines
Portugal[c]
Romania[b]
Spain[c]
Sweden
Switzerland
Thailand
United Kingdom[a]
Yugoslavia[b]
Zaire[b]

[a] Under the US Agreement for Cooperation with Euratom
[b] Under the US Agreement for Cooperation with IAEA
[c] Under both a US bilateral Agreement for Cooperation and the US-Euratom Agreement for Cooperation

- In 1985-89, all significant US exports of enriched uranium (totalling over 4.7 million kg) were to parties to the NPT, except 71,000 kg to France.

- The US Export-Import Bank has provided loans and guarantees for nuclear related projects to state parties to the NPT in excess of $US 8.5 billion since 1970.

These include such arrangements with:

Greece
Indonesia
Republic of Korea
Philippines
Romania
Spain[a]
Yugoslavia

[a] Spain accepted IAEA Safeguards on its entire civil nuclear program in 1981 and became a party to the NPT in 1987.

- Since 1958, the US has provided research reactors -- 62 research reactors to 31 states party to the NPT.

- Since 1985, all "sister laboratory" and "joint committee" arrangements concluded by the US in the nuclear field have been with parties to the NPT or the Treaty of Tlatelolco or both. These have included such arrangements with:

Colombia	Republic of Korea
Egypt	Mexico
Greece	Thailand
Indonesia	

- The United States contributed a total of almost $100 million dollars to the IAEA between 1985 and 1989 in technical assistance, including assistance in-kind (amounting to over $14 million in that time period for training courses and Type II fellowships) and extra-budgetary funds (amounting to over $7 million for Footnote A projects). Developing countries party to the Treaty have been the prime beneficiaries of these funds.

- Ninety-eight percent of all Type II Fellowships granted by the United States under the IAEA in 1985-89 (totalling approximately $6 million) have been for NPT parties, including the following:

Columbia	Nigeria
Costa Rica	Peru
Cyprus	Philippines
Ecuador	Portugal
Egypt	Senegal
Ghana	Sri Lanka
Greece	Sudan
Indonesia	Thailand
Kenya	Turkey
Korea, Republic of	Uruguay
Malaysia	Yugoslavia
Mexico	Zaire

- Other NPT parties have benefited from scientific visits and other IAEA fellowships in the US during 1985-89, including:

Bolivia	Iceland
Bulgaria	Lebanon
Czechoslovakia	Mauritius
Dominican Republic	Paraguay
Ethiopia	Poland
Guatemala	Romania
Hungary	Venezuela

- Since 1958, the start of the IAEA Fellowships, the US has trained approximately 2800 fellows. Over fifty percent of the fellowships have been Type II fellows, with the US paying the total cost. The vast majority of the IAEA fellowships, since the inception of the NPT, have been given to state parties to the NPT. Nationals of over 60 states party to the NPT have benefited from US training at a total cost of over $26 million.

- Since the 1985 Review Conference, all of the IAEA "footnote A" technical assistance projects funded by extra-budgetary contributions by the United States have been for developing countries that are NPT parties. Projects have been funded in the following countries:

Bangladesh	Malaysia
Bolivia	Mexico
Cameroon	Morocco
Columbia	Nigeria
Ecuador	Panama
Egypt	Paraguay
El Salvador	Peru
Ghana	Philippines
Greece	Poland
Guatemala	Portugal
Indonesia	Sri Lanka
Ivory Coast	Thailand
Jamaica	Uruguay
Kenya	Venezuela
Korea, Republic of	Yugoslavia

  In the period of 1985-89, these included 108 projects in specific countries, one interregional project, and eight regional projects in Asia and South America. The projects included peaceful use activities in agricultural, medical, and industrial applications; prospecting and mining; nuclear plant safety; and general atomic energy development. This program is primarily directed to the needs of the developing world.

- Since the 1985 Review Conference, all recipients of the annual US gifts of special nuclear material to the IAEA have been NPT parties. A total of over $700,000 has been given to the IAEA for designated NPT members since 1970. These countries include:

Greece	Romania
Indonesia	Thailand
Iraq	Turkey
Malaysia	Venezuela
Mexico	Yugoslavia
Morocco	Zaire
Philippines	

- NPT parties have also been the primary beneficiaries of other efforts to share US nuclear technology, expertise, and experience, including:

  Ph.D. training of over 2200 foreign nationals from more than 60 other NPT countries in nuclear physics, nuclear chemistry and nuclear engineering between 1974 and 1988;

More than 500 students from 50 countries party to the NPT received training at IAEA courses held at various Department of Energy laboratories between 1985-89. The cost of these courses were funded by the United States;

Certification, in the period 1985-89, of sixty three medical doctors from NPT countries, from all regions of the world, in nuclear medicine by the American Board of Nuclear Medicine; attendance by others at the FAO/IAEA special training course on the use of radioisotopes and radiation in entymology;

- Assistance by the US Nuclear Regulatory Commission (NRC) has been given to state parties to the NPT through cooperative agreements and arrangements, staff missions and visits and, foreign visitors/assignees to US facilities. Some of the highlights include:

Since 1974, the NRC (formerly the Atomic Energy Commission - Regulation) has entered into or renewed regulatory and safety information exchange and cooperation arrangements with the following NPT parties:

Belgium
Canada
Czechoslovakia
Denmark
Egypt
Finland
Germany, Federal Rep. of
Greece
Italy
Japan
Republic of Korea
Mexico
The Netherlands
The Philippines
Spain
Sweden
Switzerland
United Kingdom
USSR
Yugoslavia

and has similar arrangements under active negotiation with Hungary and Peru.

During the same period, the NRC entered into or renewed general research or special research project cooperation agreements with the following NPT parties:

Austria
Belgium
Canada
Finland
Germany, Federal Republic of
Italy
Japan
Korea, Republic of
Mexico
The Netherlands
The Philippines
Spain
Sweden
Switzerland
The United Kingdom
Yugoslavia

as well as with Euratom and the Organization for Economic Cooperation and Development.

The NRC has received and trained over 140 assignees from approximately 20 countries party to the NPT along with hosting hundreds of visitors from many NPT countries since the NPT's entry into force. In the past ten years over 100 NRC staff members have performed technical assistance missions to many developing countries offering their support to key regulatory and safety related matters.

- The United States Department of Energy (DOE) is also a primary contributor to the technical assistance program of the US. Several examples of the benefits countries party to the NPT derive through the DOE include:

  Research and development agreements in peaceful nuclear activities have been established with 26 NPT member states;

  The most important exchange of information takes place during visits and assignments to DOE or its contractor labs. Over 15,000 of these took place by scientists and engineers from institutions within 92 countries party to the NPT. While the majority of these countries were developing countries, almost all of the NPT member states benefited;

  Missions and visits by DOE specialists transfer training and information on the many peaceful uses of the atom. In 1988 and 1989 alone, visits were made to over 60 NPT member states totaling over 7000 man-days of effort;

  Over 500 standard certified reference materials have been supplied to 21 different member states either directly or through the National Institute of Standards and Technology (formerly the National Bureau of Standards) by the New Brunswick Laboratory;

  The National Energy Software Center at Argonne National Laboratory (ANL) has many subscribers in NPT member states Over 13,000 activities were performed by the Radiation Shielding Information Center (RSIC) for 60 NPT countries during the years 1981-89. These activities included RSIC reports, newsletters, responses to inquiries, shipment of code and data packages including new and updated software codes and data;

  In 1989, the National Technical Information Service (NTIS) announced the availability of almost 5,000 DOE titles in nuclear categories. During 1989, NTIS filled 200 orders from NPT countries.

  DOE also provides assistance by sponsoring training and technology exchange with other States for advanced safeguards and physical protection.

PREFERENCE IN POLICY AND LAW

US preference for NPT parties and other countries with full-scope safeguards is reflected in US policy, law, regulations, and practice.

The US Atomic Energy Act, as amended by the Nuclear Non-Proliferation Act of 1978 (NNPA), requires states to have all of their peaceful nuclear facilities under IAEA safeguards (full-scope safeguards) in order to receive US exports of fissionable materials, reactors, and major reactor components. Full-scope IAEA safeguards are also called for in the NPT. The NNPA further requires full-scope safeguards as a condition in any new or amended agreements for cooperation with non-nuclear weapon states. Consequently, all new or amended Agreements for Cooperation in the peaceful uses of atomic energy entered into by the United States with non-nuclear states since 1978 have been with states that are parties to the NPT or the Treaty of Tlatalelco, or both.

To provide greater assurances of supply, the ceilings on low enriched uranium transfers under US Agreements for Cooperation have been removed legislatively for NPT parties. This permits the timely and efficient supply of additional power reactor fuel to NPT parties in keeping with the view that nations possessing credible non-proliferation credentials should enjoy assurance of reliable fuel supply.

Special preferences in the licensing of nuclear-related exports have been made for NPT parties and other states having IAEA safeguards on their entire civil nuclear programs:

- expedited consideration is given as a policy matter for the export to many of these countries of so-called nuclear-related "dual use" equipment (such as computers) and technology and of types of nuclear components that do not require an Agreement for Cooperation;

- some of these countries have been designated by the Nuclear Regulatory Commission as eligible to receive exports of designated nuclear reactor components under a general license (thus eliminating the need to apply for a specific license for such exports);

- the Nuclear Regulatory Commission has issued general licenses for the export of limited quantities of nuclear material to most NPT parties (thus eliminating the need for a specific license);

- the Department of Energy takes the NPT status of recipient countries into consideration in authorizing exports of nuclear technology, services, and equipment governed by its regulations;

- many NPT parties and other states with full-scope safeguards benefit from a DOE general authorization that permit the transfer of non-public, unclassified nuclear technology in fields ranging from mining, milling, and fuel fabrication to reactor design, construction, and operation.

In the crucial area of financing, US laws governing participation in international financial institutions instruct the US representatives to consider, in carrying out their duties, whether the recipient is a party to the NPT.

This record reflects the continued strong US commitment to fulfilling its obligations under Article IV of the NPT. The record is consonant with the spirit and vision of the NPT that parties to the Treaty should obtain advantages not available to non-parties.

Article V - Nuclear Explosions for Peaceful Purposes

Article V provides that under appropriate international observation and through appropriate international procedures the potential benefits from peaceful applications of nuclear explosions will be made available to NPT non-nuclear weapon states on a non-discriminatory basis. During the period under review the United States has not conducted any nuclear explosions for peaceful purposes.

C. ARMS CONTROL AND DISARMAMENT

Article VI states: "Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a treaty on general and complete disarmament under strict and effective international control."

During the past five years the United States and other states have engaged in intensive negotiations across a broad range of arms control issues. On the one hand, these recent efforts should be seen as one segment of a long period of nearly continuous arms control negotiations and activities which date back to the mid-1950's and which were preceded by various US proposals for international consideration, such as the Baruch Plan of 1946 and President Eisenhower's "Atoms for Peace" proposal of 1953. Over time the emphasis on particular issues for negotiations has shifted, but the process has been virtually continuous, and there is no doubt that as we confront a myriad of new and complex issues in a profoundly changing world this process will continue for some time to come.

On the other hand, our efforts over the past five years have yielded unprecedented progress. For the first time since World War II, we have agreed to eliminate an entire category of nuclear delivery systems. For the first time since the end of World War II, we are on the verge of attaining real reductions in strategic delivery systems. For the first time in history, we are within reach of eliminating stockpiles and ceasing production of chemical weapons. For the first time in over half a century, Europe, which has been the center of so much conflict and confrontation, is likely to see a major reduction of military forces. For the first time ever, the members of two major alliance systems, NATO and the Warsaw Pact, have come together to discuss and exchange views on military doctrines as part of a larger effort to extend and refine tension-reducing confidence and security-building measures.

Arms control negotiations undertaken in good faith, as called for in Article VI, do not produce major results easily or quickly. Each negotiation is faced with a unique combination of political and technological issues, requiring great care and extended effort. The United States takes particular satisfaction, therefore, in the accomplishments of the last five years. During this period we have concluded bilateral agreements on nuclear risk reduction centers, intermediate range nuclear weapons, verification of nuclear testing and peaceful nuclear explosions, and chemical weapons. We have made such

substantial progress in strategic arms and conventional force negotiations that we can say we hope to conclude significant agreements in these areas before the end of the year. In the meantime, we are continuing our efforts to achieve a global ban on chemical weapons and to expand confidence and security-building measures in Europe.

President Bush has given the highest priority in his Administration to the achievement of arms control agreements which will strengthen international stability. Building on the foundations of solid progress made during President Reagan's term, President Bush, in close consultation with our allies, has advanced a number of new arms control initiatives. Two meetings with U.S.S.R. President Gorbachev, in December 1989 at Malta, and in June 1990 at Washington, and a number of ministerial-level discussions led by Secretary of State Baker and U.S.S.R. Foreign Minister Shevardnadze, have given impetus to the negotiating process.

The following review summarizes the recent progress made in arms control negotiations.

INF

The December 1987 signing of the Treaty Between the United States and the Union of Soviet Socialist Republics on the Elimination of Their Intermediate-Range and Shorter-Range Missiles, known more commonly as the INF Treaty, was the culmination of a six-year period of negotiation. The entry into force of the INF Treaty, in June 1988, ushered in a uniquely rigorous regime of verification.

INF negotiations began in December 1981, shortly after President Reagan had proposed that all intermediate-range missiles be eliminated from Europe. In the first phase of the negotiations various alternatives to President Reagan's "zero-zero option" were explored, including an interim treaty proposed by the United States in May 1983. After a year's hiatus, the negotiations resumed in March 1985 as part of a broader framework which also included strategic and space talks. The new framework was called Nuclear and Space Talks (NST).

Two meetings between Presidents Reagan and Gorbachev, at Geneva in November 1985 and at Reykjavik in October 1986, helped to provide impetus to the INF negotiations. The 1985 Summit directed that attention be given to an interim agreement, while at the 1986 Summit there was agreement on the broad outlines of the treaty itself, which emerged a year later. It was agreed at Reykjavik that intermediate-range missiles would be eliminated in Europe and that each side could deploy no more than 100 such missiles elsewhere.

In 1987 consideration was also given to including shorter-range missiles in a treaty. In June of that year the North Atlantic Council of NATO called for a verifiable elimination of all US and Soviet shorter-range missiles (500-1000 km) and all their intermediate-range missiles (1000 km-5500 km). On December 18, 1987, Presidents Reagan and Gorbachev signed the INF Treaty, which indeed included both shorter-range and intermediate-range missiles. As concluded, the Treaty goes further than the Reykjavik understanding, in that all such missiles are to be eliminated. After ratification procedures were completed the Treaty entered into force at the Moscow Summit on June 1, 1988.

Under this Treaty, roughly 2,600 missiles and all spare missile stages will be eliminated over a three-year period. In addition to the elimination of the missiles themselves, all support structures and support equipment must be eliminated. All shorter-range missiles and their support structures and equipment were, in accordance with the Treaty, eliminated within 18 months after the Treaty's entry into force.

The INF Treaty establishes an extensive verification system. In addition to the provision for National Technical Means (NTM), the Treaty also provides for inspection of eliminations and, for a 13-year period, of various types of on-site inspection, including the right to carry out short-notice inspections and the establishment of continuous monitoring inspection sites in the United States and the Soviet Union. The Special Verification Commission is given authority to agree on measures to improve the viability and effectiveness of the Treaty.

The significance of the INF Treaty is undoubtedly greater than the sum of its many components. It will eliminate an entire class of US and Soviet weapons on a global basis, and it has established an extensive verification regime that includes on-site inspection. Thus, it has established an outstanding precedent for future arms control efforts.

START

New negotiations with the Soviet Union on strategic nuclear weapons began in June 1982. From the outset of these negotiations the US objective has been to enhance national security through achieving significant reductions in strategic weapons systems that are equitable, stabilizing, and effectively verifiable. To underscore their purpose, we have called these new negotiations Strategic Arms Reduction Talks, or START.

At the Reykjavik meeting in October 1986 Presidents Reagan and Gorbachev reached an understanding on the general outlines of an agreement, principally that there would be an overall limit of 6,000 warheads and 1,600 strategic delivery systems. The following May the United States tabled a draft treaty with these overall limits but also with sublimits, especially on the most destabilizing weapons, ICBMs. The US draft treaty also called for a number of verification provisions and for a reduction in throw weight to equal levels.

By the December 1987 Summit, the two sides were working on a joint draft treaty. Further progress was made in 1988 on verification and on dealing with some particularly difficult issues such as air-launched cruise missiles and verification of mobile ICBMs. In June 1989 the United States presented President Bush's Verification and Stability Initiative, which stressed a number of verification and confidence-building measures -- such as on-site monitoring of missile production, data exchange on strategic nuclear forces, and notification of strategic exercises.

At their September 1989 meeting in Wyoming Secretary of State Baker and Foreign Minister Shevardnadze signed the "Agreement on Principles of Implementing Trial Verification and Stability Measures" intended to be carried out pending the conclusion of a START treaty. Subsequently, beginning in November 1989 several specific measures have been implemented or agreed upon. Among them are reciprocal demonstrations of techniques for identifying, or "tagging", ballistic missiles, reciprocal exhibition of heavy bombers, and reciprocal demonstrations of verifying the permissible number of warheads on ballistic missiles.

During the Washington Summit Presidents Bush and Gorbachev instructed their negotiating teams in Geneva to intensify work on the Joint Draft Text. They stated the following:

> The START Treaty will be a major landmark in both arms control and in the relationship between the United States of America and the Union of Soviet Socialist Republics. It results from the recognition by both sides of the special obligation they bear to reduce the risk of outbreak of nuclear war, enhance strategic stability, and strengthen peace and international security. As such, the START Treaty will signal a turning point in U.S.-Soviet arms control efforts toward a more rational, open, cooperative, predictable and stable relationship. The Treaty will complement to a remarkable degree the important political changes which have recently begun to remove the hostility and suspicion and will facilitate the reduction of the sizeable stockpiles of strategic offensive arms which now exist.

Achieving a START Treaty will be a significant step forward, but it is just that, a step. At the Washington summit meeting the two sides issued a joint statement on future nuclear and space negotiations. The statement outlines the principal objectives:

> The United States of America and the Union of Soviet Socialist Republics, building on the results of the current negotiations, agree to pursue new talks on strategic offensive arms, and on the relationship between strategic offensive and defensive arms. The objectives of these negotiations will be to reduce further the risk of outbreak of war, particularly nuclear war, and to ensure strategic stability, transparency and predictability through further stabilizing reductions in the strategic arsenals of both countries. This will be achieved by seeking agreements that improve survivability, remove incentives for a nuclear first strike and implement an appropriate relationship between strategic offenses and defenses.

CONVENTIONAL FORCES IN EUROPE

On March 23, 1989, the 23 members of the North Atlantic Treaty Organization and the Warsaw Treaty Organization opened negotiations in Vienna on Conventional Forces in Europe (CFE). These negotiations, which cover the area from the Atlantic Ocean to the Ural Mountains, will result in substantial reductions and limitations of tanks, armored combat vehicles, artillery, aircraft, helicopters, and manpower. Significant progress has been made in these extensive and complex negotiations. Achievement of a CFE agreement continues to be the highest arms control priority for the United States in Europe, and as we now enter the final phase of the negotiations the United States, in close consultation with our European Allies, will redouble efforts to negotiate mutually acceptable agreements on all outstanding issues consistent with its security interests.

NUCLEAR TESTING

The United States and the Soviet Union completed in June new verification protocols for the Threshold Test Ban Treaty (TTBT) of 1974 and the Peaceful Nuclear Explosions Treaty (PNET) of 1976. The verification regime for these two treaties will include hydrodynamic yield measurement, on-site inspection (permitting each side to take core samples and rock fragments from areas of underground nuclear tests and peaceful nuclear explosions), and seismic monitoring. As a result of concluding the verification protocols, which provide effective verification of the 150 kiloton threshold, we expect to move expeditiously on ratifying the TTBT and the PNET.

The United States has a step-by-step approach to further limits on nuclear testing. The United States believes that the unprecedented nature and complexity of these verification provisions require that we gain some experience with them as a guide to the character of the most appropriate next steps toward further limitations on testing. This approach is based on the simple proposition that we should learn how well the just-agreed verification regime works as a necessary foundation for making or accepting proposals which build on it.

The United States will be ready, as it puts into practice the new verification protocols, to propose negotiations on possible further limitations that make sense from a national security standpoint, contribute to stability, and still guarantee a reliable, safe, and effective deterrent.

However, nuclear weapons will continue to play a critical role in U.S. national security strategy. So long as the United States must rely upon nuclear weapons for deterrence, we must have a sensible test program that ensures the credibility and safety of our forces. In this context, the United States has not identified any further limitations on nuclear testing beyond those now contained in the TTBT that would be in the U.S. national security interest.

A comprehensive test ban remains a long-term objective of the United States. It believes that a comprehensive test ban must be viewed in the context of a time when the United States does not need to depend on nuclear deterrence to ensure international security and stability, and when the U.S. has achieved broad, deep, and effectively verifiable arms reductions, substantially improved verification capabilities, expanded confidence-building measures, and greater balance in conventional forces.

CHEMICAL WEAPONS

On June 1 Presidents Bush and Gorbachev signed an historic agreement which will result in the destruction of the vast bulk of US and Soviet chemical weapons by the year 2002. This agreement followed President Bush's proposal of September 1989 that the United States and the Soviet Union take the initiative in destroying chemical weapons stockpiles, which could provide impetus toward achieving a global ban on the production of chemical weapons. Meanwhile, multilateral negotiations on a global ban on chemical weapons continue at the Conference on Disarmament (CD) in Geneva. We believe that it is in the interests of everyone that at the earliest possible date we conclude a comprehensive, verifiable global chemical weapons ban.

CONFIDENCE AND SECURITY-BUILDING MEASURES

Since March 1989 important negotiations on confidence and security-building measures (CSBMs) have been taking place in Vienna. These negotiations, an integral element of the process of the Conference on Security and Cooperation in Europe (CSCE), follow the successful conclusion of the CSCE-mandated Conference on Disarmament in Europe (CDE) which successfully concluded its work in 1986. A particularly significant development related to the Vienna CSBM talks was the Military Doctrine Seminar held in Vienna from January 16 to February 5, 1990. This was the first official meeting in which senior military officials from Europe, Canada, and the United States engaged in a discussion of military doctrines. The principal purpose was to have a free and frank exchange of ideas in order to reduce misunderstandings of conventional military doctrines.

OPEN SKIES

On May 12, 1989, President Bush proposed that NATO and Warsaw Pact states agree to let unarmed aircraft overfly each other's territory. Pursuant to President Bush's initiative, an "Open Skies Conference" was held in Ottawa, Canada in February 1990; it was followed by another meeting in Budapest, Hungary in April and May. The United States and our NATO Allies envisage these discussions as leading to a treaty which would provide for the observation of military activities and installations, so as to increase transparency, lessen danger and relax tension, thereby reinforcing confidence and security in Europe, North America, and Asia.

SHORT-RANGE NUCLEAR FORCES

The United States has been responsive to the changing security situation in Europe, and it is committed to negotiating reductions in the US and Soviet ground-based short-range nuclear missile systems in Europe. Indeed, the United States has proposed that the timetable for new US-Soviet arms control negotiations on short-range nuclear forces (SNF) be changed so that negotiations would begin shortly after a CFE treaty has been signed. That is, the United States now proposes not to wait until a CFE treaty is being implemented to begin SNF negotiations.

Moreover, because of the new military and political conditions in Europe, the United States announced on May 4, 1990 the cancellation of any further modernization of US nuclear artillery shells deployed in Europe. On July 6, based on a US proposal, NATO leaders agreed that once SNF negotiations begin the Alliance will propose, in return for reciprocal action by the Soviet Union, the elimination of all its nuclear artillery shells from Europe.

In conclusion, three points need to be stressed. First, we can take great satisfaction from the substantial progress which has been made during the past five years as a result of our efforts to undertake arms control negotiations in good faith, as called for in Article VI. Second, arms control is both a process and the achievement and implementation of specific agreements. The process is continuous, complex, and difficult. For these reasons, specific accomplishments cannot usually be predicted in terms either of time or specific content. It would be a serious mistake to attempt to constrain a complex and difficult process either with specific schedules or detailed negotiating goals. Third, although the nuclear weapon states, including of course the United States, acknowledge a special responsibility in arms control negotiations, it is essential to keep in mind that Article VI is not limited in its application to nuclear weapon states alone. All NPT parties are committed to fulfill the obligations of Article VI. This is as it should be, for when arms control negotiations are undertaken in a way which reduces tension and strengthens stability the conditions necessary for the peaceful resolution of regional and global issues are greatly improved. We all benefit when we all pursue arms control negotiations as called for in the Treaty.